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Notice of Allowability	Application No.	Applicant(s)	
	10/607,839	RYAN ET AL.	
	Examiner	Art Unit	
	George Manuel	3762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to _____.
2. ☒ The allowed claim(s) is/are 1-22.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
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| <ol style="list-style-type: none">1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date <u>2/2/04, 10/27/03</u>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none">5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____.7. <input type="checkbox"/> Examiner's Amendment/Comment8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance9. <input type="checkbox"/> Other _____. |
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DETAILED ACTION

Allowable Subject Matter

Claims 1-22 are allowed.

The following is an examiner's statement of reasons for allowance:

The method comprising the steps of simultaneously enabling an impedance switch operably electrically connected to a sensing lead to increase the impedance of the sensing lead; and terminating the electrical stimulus and simultaneously activating stimulation shunts to dissipate residual charge in the stimulation lead as claimed are not taught nor suggested by the prior art of record. Further, an adapter comprising a switch timing circuit interconnecting a current sensing circuit with an impedance switch; and a stimulation shunt timing circuit interconnecting the current sensing circuit with a stimulation shunt; or a pair of impedance switches interposed between sensing inputs and sensing leads where the impedance switches are operably controlled by the current detector; or means for selectively switching impedance operably controlled by means for detecting current and means for shunting the stimulation leads to dissipate residual electrical charge, where the stimulation shunting means is operably controlled by the means for detecting current as claimed are not shown or suggested in the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ryan et al '678 (of record) disclose a shunt control 225 and teach using a switch to terminate the output current from a high impedance to a low impedance for a short period of time to allow for voltage dissipation. There lacks a teaching to simultaneously enable an impedance switch to connect a sensing lead to increase the impedance of a sensing lead while applying an electrical stimulus to cardiac tissue via a stimulating lead. Also, there lacks motivation to combine the switch with a current detector and Ryan et al teach against impedance switches being operably controlled by a current detector since shunt control 225 sends a control 257 to current control driver 221. See Fig. 33.

Cox et al '130 disclose using shunt capacitors 104 and 108 in an implantable cardiac stimulation device; however, there lacks motivation to combine the current shunting with a timing circuit or impedance switches.

Norman '194 discloses creating a shunt to allow a portion of alternating current to be shunted to increase the impedance caused by poor continuity of electrodes.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Manuel whose telephone number is (571) 272-4952.


George Manuel
Primary Examiner
Art Unit: 3762

9/15/05